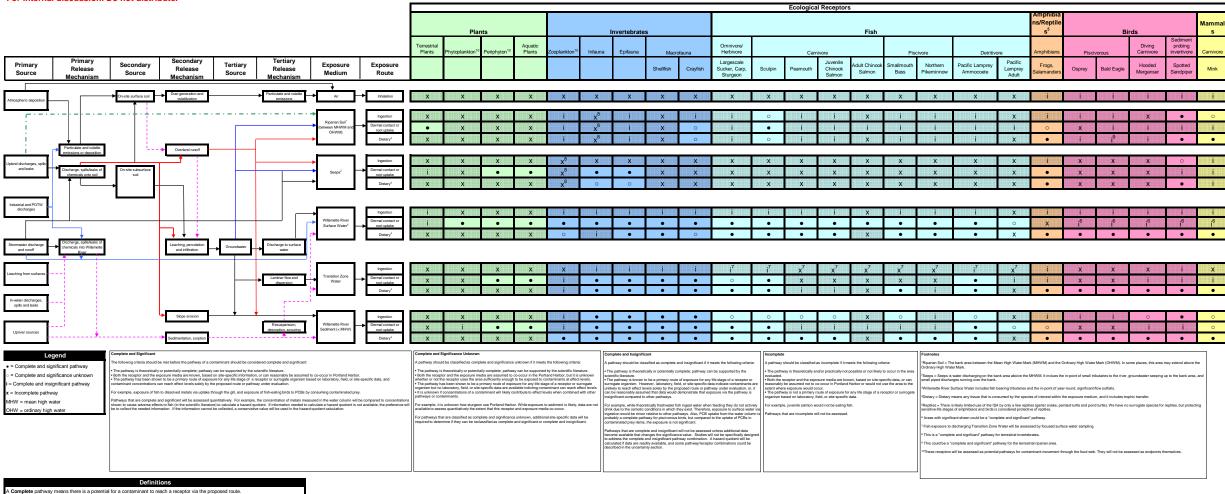
# DRAFT Ecological risk assessment conceptual site model for the Portland Harbor Superfund Site For internal discussion. Do not distribute.

An Incomplete pathway means there is no potential for a contaminant to reach a receptor via the proposed route.



# Definitions for Pathway Designation Portland Harbor NRDA

#### **DEFINITIONS**

#### Complete

A complete pathway means there is a potential for a contaminant to reach a receptor via the proposed r

#### Incomplete

An incomplete pathway means there is no potential for a contaminant to reach a receptor via the propos

#### Significant

A significant pathway means there is a high likelihood that a contaminant can reach effect levels via the

#### Insignificant

An insignificant pathway means there is a low likelihood that a contaminant can reach effect levels via tl

## Significance Unknown

Significance unknown means that it is unknown that a contaminant could reach an effect level via the pile However, the contaminant might contribute to effect levels when combined with other pathways or other

#### CONDITIONS FOR PATHWAY AND SIGNIFICANCE COMBINATIONS

## Complete and Significant

The following criteria should be met before the pathway of a contaminant should be considered comple-

- The pathway is theoretically or potentially complete; pathway can be supported by the scientific literatu
- Both the receptor and the exposure media are known, based on site-specific information, or can reasc co-occur in Portland Harbor.
- The pathway has been shown to be a primary route of exposure for any life stage of a receptor or sur based on laboratory, field, or site-specific data, and contaminant concentrations can reach effect levels proposed route or pathway under evaluation.

For example, exposure of fish to dissolved metals via uptake through the gill, and exposure of fish-eatir consuming contaminated prey.

Pathways that are complete and significant will be assessed quantitatively. For example, the concentra measured in the water column will be compared to concentrations shown to cause adverse effects to fis literature) to calculate a hazard quotient. If information needed to calculate a hazard quotient is not ava will be to collect the needed information. If the information cannot be collected, a conservative value wi hazard quotient calculation.

#### Complete and significance unknown

A pathway should be classified as complete and significance unknown if it meets the following criteria:

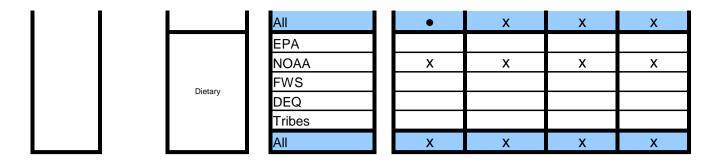
• The pathway is theoretically or potentially complete; pathway can be supported by the scientific literatu

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	Aqua	ntic Inverteb	rates					Fish
Zooplankton	Infauna	Epifauna	Macro	ofauna	Omnivore/ Herbivore		Carnivore	
			Shellfish	Crayfish	Largescale Sucker, Carp, Sturgeon	Sculpin	Peamouth	Juvenile Chinook Salmon
	V		V	V	V	V	Х	V
X	X	X	X	X	X	X		X
X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X
X	Χ	X	X	Х	X	X	X	X
Х	Х	X	Х	Х	X	Х	Х	Х
X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X
Χ	Χ	X	X	Х	X	Х	Х	Χ
Х	Х	Х	Х	Х	Х	Х	Х	Х
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i	•	•	0	0	0	0	0	0
Х	X	Х	X	Х	X	X	Х	X
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Х	X	X	Х	Х	X	X	Х	Х
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i	•	•	•	•	0	0	0	0
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			Amphibians/ Reptiles		Bir	·ds	
Pisc	ivore	Detritivore	Amphibians	Pisciv	vorous	Diving Carnivore	Sediment probing invertivore
Smallmouth Bass	Northern Pikeminnow	Pacific Lamprey Ammoccoete	Frogs, Salamanders	Osprey	Bald Eagle	Hooded Merganser	Spotted Sandpiper
Х	Х	Х	X	Х	X	Х	Х
Х	Х	Х	Х	Х	Х	Х	Х
Х	Х	X	i	i	i	i	i
X	X	X	0	0	0	0	0
X	X	X	i	i	i	i	i
Х	Х	Х	i	Х	X	Х	X
Х	Х	Х	i	Х	Х	i	i
Х	Х	Х	i	Х	Х	0	•
Х	Х	Х	0	i	i	i	0
X	X	X	İ	X	X	X	0
	V		0	i	i	i	
<b>X</b>	X i	X •	•	i	i	•	•
0	0	0	0	X	X	i	i
Х	Х	Х	0	i	i	0	0
Х	Х	Х	•	Х	Х	Х	i
Х	Х	Х	•	0	0	0	0
0	i	•	•	•	•	•	•
0	0	0	0	0	0	0	0
X	X	X	X	X	X	X	0
Х	Х	Χ	•	Х	Χ	Χ	•
i	i	i	i	i	i	i	i
X	X	X	i	i	i	i	i
X	X	X	i	i	i	i	i
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X	Х	Х	i	Х	Х	i	i
Х	Х	Х	i	Х	Х	i	i
Х	Х	•	Х	Χ	Χ	Χ	Χ
X	Х	i	i	X	X	Х	i
Х	Х	0	0	Х	Х	Х	Х
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i	i	•	•	Х	Х	i	i
Х	Х	•	Х	Х	Х	Х	Х
X	X	•	•	Χ	Х	i	i
i	i	0	•	0	0	0	0
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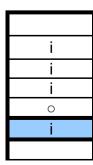
Mammals

Carnivore

Mink

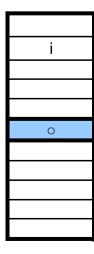
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